

ZOOM ON **GNOTOMICE**



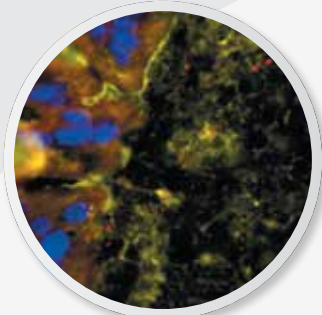
GNOTOBIOLOGY **EXPERTISE**

New gnotobiotic C57BL/6J mouse model with stable simplified murine
intestinal microbiota and SOPF-like phenotype

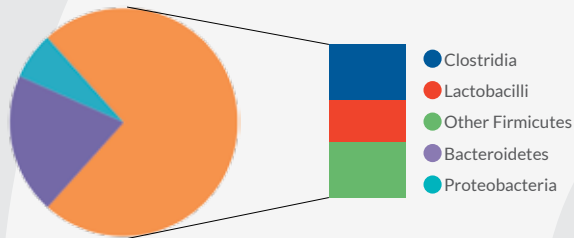
FROM MICROBIOME TO HOST PHYSIOLOGY

Selected data at a glance:

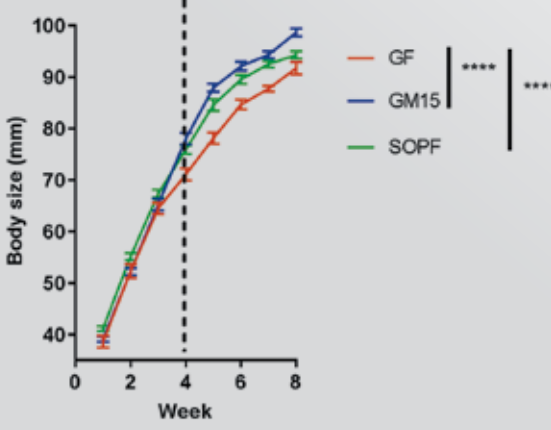
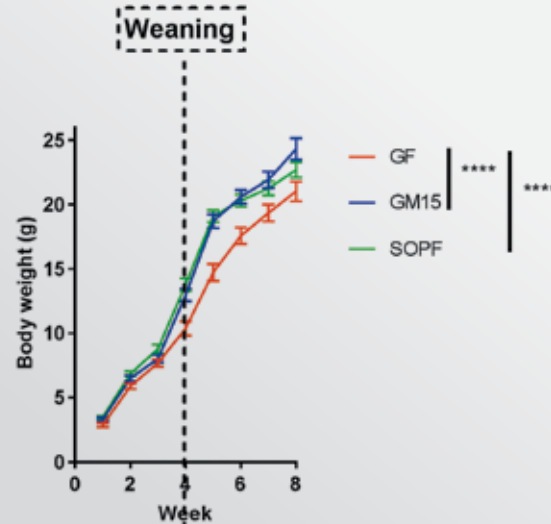
GNOTOMICE recapitulates JAX® C57BL/6J SOPF phenotype



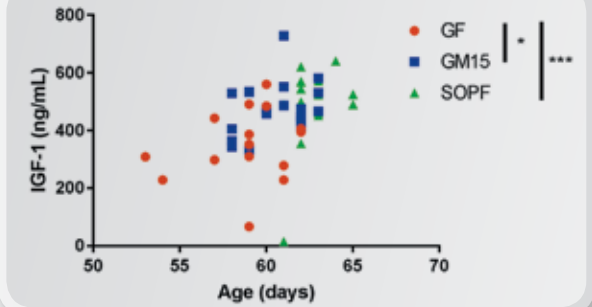
Mature gut barrier



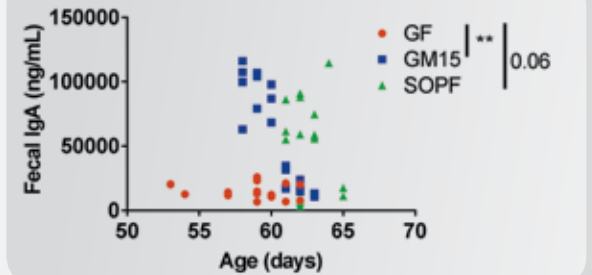
Controlled microbiota



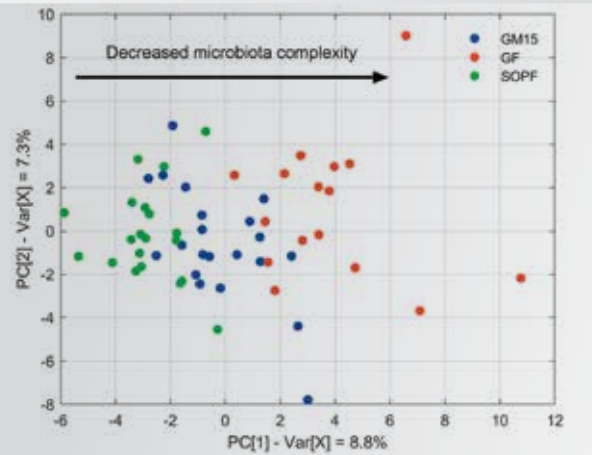
Macro Phenotype



Endocrine system



Immune system



Metabolic profile

GF : germ free
 GM : GNOTOMICE
 SOPF : specific opportunistic pathogen free

MICROBIOME SOLUTIONS FOR REPRODUCIBLE PRECLINICAL STUDIES

FEATURES

- Gnotobiotic mouse model created from:
 - GF mice obtained by axenization of **JAX® C57BL/6J** SOPF mice performed by BIOASTER in 2016
 - **15 representative and prevalent murine intestinal bacteria** isolated either by BIOASTER or from DSMZ collection
- **Standardized breeding** in controlled housing environment (control GF and SOPF mice available)
- **Gut microbiota stability** over 4 filial generations, under breeding and maintenance diets, and in aging
- **Reproducible fecal microbiota transfer** in GF mice
- Data collection:
 - **Bacterial genomes** and **metagenomic functional profile**
 - **Gut microbiota quantitative composition** obtained by specific microfluidic qPCR
 - **Phenotype database**

ADVANTAGES

- **Gain of reproducibility:** stable host genetics, controlled microbiota, standardized breeding and housing
- **Recapitulation of JAX® C57BL/6J SOPF macro, immuno, endocrino and metabophenotypes**
- **Quantification of gut microbiota dynamics**
- Establishment of **causal relationships** between microbiome, expressed functions and host biology

APPLICATIONS

- All-purpose model for **research and drug testing**
- Study of **host-microbes and microbes-microbes interactions, and environmental impact on health and diseases**
- Core model to develop **customized gnotobiotic mouse models**

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More information about gnotobiology on www.bioaster.org

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